

S/N: 09/412,618PATENT
P-2070-US**REMARKS**

Applicant has carefully studied the outstanding Office Action. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Claims 1 – 29 are pending. Reconsideration of the application is respectfully requested.

Attached hereto is a marked-up version of the changes made to the claims by the hereinabove amendment. The attached page is captioned "Version With Markings To Show Changes Made."

Claim Rejections under 35 U.S.C. §103

Claims 1-29 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Penn et al. ('652) in view of Sanders, Jr et al. ('051).

Claims 1, 3, 4, 5, 13, 15 and 23 have been amended.

Claim 1 (as amended) discloses a method for three-dimensional printing of a three-dimensional model. The method includes dispensing a first interface material having a first modulus of elasticity, dispensing a second interface material having a second modulus of elasticity and combining the first and second interface materials in pre-determined proportions to produce construction layers for forming the three-dimensional model.

Penn et al. ('652) describes the production of an object by representing the object in the database as a solid voxels surrounded by support voxels within a volume. Penn et al. ('652) suggests in an example for producing a multi-layered printed circuit board (column 16, lines 19-23) using aluminum as an object material and polycarbonate plastic as an insulating material. Penn et al. ('652) does not disclose or suggest combining these two materials to obtain a third material forming the 3-D object.

S/N: 09/412,618PATENT
P-2070-US

Thus, in contrast to claim 1. Penn et al. ('652) does not disclose or suggest combining at least two different interface materials, each having a different modulus of elasticity to produce the layers forming the three-dimensional model.

Sanders, Jr et al. ('051) describes a method and apparatus for producing a three-dimensional model by, *inter alia*, producing a plurality of bead producing drops for deposition and controlling the location and timing of deposition to produce vectors. Sanders, Jr et al. ('051) describes in column 18, lines 59-67, the use of four jet heads for depositing four colors or shades of a single interface material so as provide a model having different colors or shades. Sanders, Jr et al. ('051) does not describe or suggest combining at least two different interface materials, each having a different modulus of elasticity.

Sanders, Jr et al. ('051) fails to cure the defects of Penn et al. ('652). Accordingly, the Examiner's proposed combination of Penn et al. ('652) and Sanders, Jr et al. ('051) falls short of the claimed invention, whereby claim 1 is non-obvious under 35 USC 103(a) in view of the cited art. Claims 2-12 being dependent from claim 1 are similarly non-obvious under 35 USC 103(a) in view of the cited art.

Claim 13 (as amended) is directed to a system for three-dimensional printing using the method of claim 1. Thus, for similar reasons described above, claim 13 is non-obvious under 35 USC 103(a) in view of the cited art. Claims 14-22 being dependent from claim 13 are similarly non-obvious under 35 USC 103(a) in view of the cited art.

Claim 23 (as amended) is directed to a system for three-dimensional four-color printing of a three-dimensional model. The system is similar to the system of claim 13 having, *inter alia*, a plurality of dispensers connected to at least one printing head for dispensing a plurality of interface materials and control means for combining the plurality of interface materials in pre-determined proportions to produce layers having different colors. Each of the plurality of interface materials has a different modulus of elasticity.

S/N: 09/412,618

PATENT
P-2070-US

Thus, for similar reasons described above, claim 23 is also non-obvious under 35 USC 103(a) in view of the cited art. Claims 24-29 being dependent from claim 23 are similarly non-obvious under 35 USC 103(a) in view of the cited art.

Applicant notes the Examiner's citation of prior art to complete the record.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Applicants have carefully studied the outstanding Office Action. The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance.

Applicant notes the Examiner's citation of prior art to complete the record.

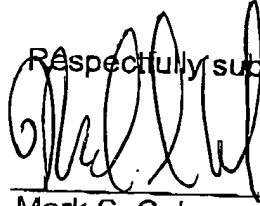
Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

S/N: 09/412,618

PATENT
P-2070-US

In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Respectfully submitted,



Mark S. Cohen
Attorney for Applicant(s)
Registration 42,425
No.

Dated: May 31, 2001

Eitan, Pearl, Latzer, Cohen-Zedek
c/o: AQUILINO, WELSH & FLAXMAN
2341 Jefferson Davis Hwy., Ste. 112
Arlington, VA 22202
Tel: (703) 920-1122
Fax: (703) 920-3399